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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/733,783

12/08/2000

Tricci Y. So

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02/22/2005

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EXAMINER

TON, DANG T

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/733,783	Applicant(s) SO ET AL.	
	Examiner DANG T TON	Art Unit 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on application filed 12/08/2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 54-61 is/are allowed.
- 6) ☒ Claim(s) 1-23 and 26-53 is/are rejected.
- 7) ☒ Claim(s) 24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The disclosure is objected to because of the following informalities:

Applicant should provide a status of the copending applications serial number 09/552,278 and 09/699,199 recited in the page1 of the specification.

Appropriate correction is required.

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3,5-7,16-18,20-22,26,27,30,31,34,35,38,39,42-50, and 52 are rejected under 35 U.S.C. 102(e) as being anticipated by Gibson (6,678,264).

For claims 1-3,5-7,16-18,20-22,26,27,30,31,34,35,38,39,42-50, and 52, Gibson disclose establishing connections with a pre-specified quality of service across a communication network comprising :

defining a set of label switched paths (see column 2 lines 26-27);

defining a micro-flow comprising a set of data packets, the micro-flow having a quality of service type (see column 2 lines 28-31 and 20-24);

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selecting a particular label switched path from the defined set of label switched paths based on the quality of service type of the micro-flow (see column 2 lines 35-36);
transmitting the micro-flow along the selected label switched path (see column 2 lines 35-36);

determining a quality of service type supportable by label switched paths of the defined set of label switched paths (see column 2 lines 20-24);

wherein the selected label switched path is in a set of label switched paths capable of supporting the quality of service type of the micro-flow(see column 2 lines 20-24);

determining a destination set of defined label switched paths capable of providing access to a destination address of the micro-flow (see column 3 lines 12-15);

wherein the selected label switched path is service type of the micro-flow (see column 3 lines 53-57);

wherein the predefined label switched path is utilized by fewer data packets than other label switched paths in the set of predefined label switched paths (see column 3 lines 58-64);

a database including a predefined a set of label switched paths(see administrative server in column 8);

an internal routing fabric capable of internally routing a micro-flow, wherein the micro-flow comprises a set of data packets, and wherein the micro-flow has a quality of service type (see column 8 lines 25-41);

logic that selects a particular label switched path from the defined set of label

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switched paths included in the database, the particular label switched path being selected based on the quality of service type of the micro-flow (see column 8 lines 25-41);

an egress line card capable of transmitting the micro-flow along the selected label switched path (see column 2 lines 26-27);

further comprising logic for determining a quality of service type supportable by label switched paths of the defined set of label switched paths (see column 2 lines 20-24 and 28-31);

wherein selected label switched path is in a set of label switched paths capable of supporting the quality of service type of the micro-flow (column 2 lines 20-24 and 28-31);

further comprising logic that determines a destination set of defined label switched paths capable of providing access to a destination address of the micro-flow (see column 3 lines 12-15);

further comprising the operation of determining a quality of service type supportable by label switched paths of the destination set of label switched paths (see column 2 lines 20-24);

wherein the selected label switched path is in a quality of service set of label switched paths capable of supporting the quality of service type of the micro-flow (see column 2 lines 20-24);

defining a set of label switched paths (see column 2 lines 26-27);

defining a micro-flow comprising a set of data packets (see column 2 lines 26-27);

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selecting a particular label switched path from the defined set of label switched paths based on a utilization value of the particular label switched path (see column 2 lines 35-36);

transmitting the micro-flow along the selected label switched path (see column 2 lines 35-36);

wherein the utilization value is an amount of data packets transmitted along the particular label switched path; wherein the particular label switched path further is selected based on a destination value of the micro-flow (see column 2 lines 20-24);

wherein the micro-flow further includes a quality of service type(see column 8 lines 25-41);

storage including a predefined a set of label switched paths (see administrative server in column 8);

an internal routing fabric capable of internally routing a micro-flow, wherein the micro-flow comprises a set of data packets (see column 8 lines 25-41);

logic that selects a particular label switched path from the defined set of label switched paths included in the storage, the particular label switched path being selected based on the a utilization value of the particular label switched path (see column 2 lines 26-27 and column 8 lines 25-41);

an egress line card capable of transmitting the micro-flow along the selected label switched path (see column 2 lines 26-27 and column 8 lines 25-41) ;

wherein the utilization value is an amount of data packets transmitted along the particular label switched path (see column 2 lines 20-24);

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wherein the particular label switched path further is selected based on a destination value of the micro-flow (see column 2 lines 35-36);

wherein the qos type includes a quality of service type(see column 2 lines 20-24).

receiving a first aggregate flow comprising a plurality of individual data flows; each individual data flow comprising a plurality of data packets (see column 3 lines 11-18);

separating the aggregate flow into a plurality of individual micro-flows, each individual micro-flow comprising a data flow (see column 3 lines 11-18);

routing the micro-flows to an egress switch (see column 8 lines 25-41);

creating a second aggregate flow comprising a set of micro-flows using the egress switch (see column 3 lines 15-18); and

transmitting the second aggregate flow (see column 3 lines 15-18);

wherein the first aggregate flow is a label switched path (see column 3 lines 11-14);

wherein the second aggregate flow is a label switched path (see column 3 lines 15-18);

wherein each micro-flow includes a quality of service attribute (see column 2 lines 20-24);

wherein each micro-flow is routed to the egress switch based on the quality of service attribute of the micro-flow ; further comprising the operation of defining a set of label switched paths (see column 2 lines 20-24);

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further comprising the operation of determining a destination set of label switched paths capable of providing access to a destination address of the micro-flow (see column 3 lines 11-18);

further comprising the operation of determining a quality of service type supportable by label switched paths of the destination set of label switched paths (see column 2 lines 20-24);

wherein the selected label switched path is in a quality of service set of label switched paths capable of supporting the quality of service type of the micro-flow (see column 2 lines 35-36);

defining a set of label switched paths (see column 2 lines 26-27);

defining a micro-flow comprising a set of data packets, the micro-flow having a quality of service type (see column 2 lines 20-24 and 28-31);

determining the quality of service type supportable by label switched paths of the defined set of label switched paths (see column 2 lines 20-24);

selecting a particular label switched path from the defined set of label switched paths based on the quality of service type of the micro-flow (see column 2 lines 35-36); and

transmitting the micro-flow along the selected label switched path (see column 2 lines 35-36).

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the

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subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9,10,13,32,33,40,41,51,and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibson in view of Fan et al. (6,408,005).

For claims 9,10,13,32,33,40,41,51,and 53, Gibson et al. disclose all the subject matter of the claimed invention with the exception of transmission rate, delay variation and maximum rate in a communications network. Fan et al from the same or similar fields of endeavor teaches a provision of constructing the rate from two components allows the scheduler to operate under three modes, full available rate (max rate), minimum guaranteed rate and halt transmission (delay transmission) (see column 5 lines 45-51). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use transmission rate, delay variation and maximum rate as taught by Fan et al. in the communications network of Gibson.

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The transmission rate, delay variation and maximum rate can be implemented/modified into the network of Gibson by using the administrative server in figure 2 to perform this scheduling scheme. The motivation for using transmission rate, delay variation and maximum rate as taught by Fan et al. into the communications network of Gibson being that it provides much higher utilizations while maintaining the guaranteed QoS.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 28,29,36,and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibson in view of Kaplan et al. (6,473,404).

For Claims 28,29,36,and 37, Gibson et al. disclose all the subject matter of the claimed invention with the exception of recording an amount of data packets being transmitted along each label switched path (LSP) in a communications network. Kaplan et al from the same or similar fields of endeavor teaches a provision of measuring the amount of packets received (see column 8 lines 6-8). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use recording an amount of data packets being transmitted along each label switched path (LSP) as taught by Kaplan et al. the communications network of Gibson.

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The recording an amount of data packets being transmitted along each label switched path (LSP) can be implemented/modified into the network of Gibson by storing the amount of packets in the administrative server in figure 2. The motivation for using recording an amount of data packets being transmitted along each label switched path (LSP) as taught by Kaplan et al. into the communications network of Gibson being that it provides a specific flow can be used to efficiently route the data associated with the flow from one switch to another switch.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4,8,11,12,14,15,19, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibson.

For Claims 4,8,11,12,14,15,19, and 23, Gibson et al. disclose all the subject matter of the claimed invention with the exception of the selected label switched path being utilized by fewer data packets the other label switched paths in a communications network. However, using the selected label switched path being utilized by fewer data packets the other label switched paths in a communications network Gibson does not provide any unexpected results. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the selected label switched

path being utilized by fewer data packets the other label switched paths in a communications network of Gibson .

The selected label switched path being utilized by fewer data packets the other label switched paths in a communications network can be implemented/modified into the network of Gibson since Gibson does teach the selected label switch. The motivation for using the selected label switched path being utilized by fewer data packets the other label switched paths in a communications network being that it provides a specific flow can be used to efficiently route the data associated with the flow from one switch to another switch.

8. Claims 54-61 are allowed.

9. Claims 24-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

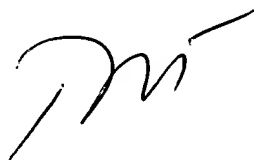
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANG T TON whose telephone number is 571-272-3171. The examiner can normally be reached on MON-WED, 5:30 AM-6:00 PM and Thur 5:30-9:30 A.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RAO SEEMA can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D. Ton



DANGLTON
PRIMARY EXAMINER